

## **Remarks**

### **I. Status of the Application and Claims**

As originally filed, the present application had a total of 18 claims. These were cancelled and replaced with claims 19-39 in a Preliminary Amendment submitted at the time of filing. Claims 32-36, 38 and 39 were withdrawn as the result of a restriction requirement and claims 38 and 39 were cancelled in a previous response. In the present response, new claims 40 and 41 have been added. Thus, the claims now pending are 19-31, 37, 40 and 41. Claims 32-36 have been withdrawn but not cancelled.

### **II. The Amendments**

The only amendments made herein were to add new claims 40 and 41. Support for these claims may be found on page 17, line 31 - page 18, line 5. The claims do not add new matter to the application and their entry is therefore respectfully requested.

## **The Rejections**

### **I. Rejection of Claims Under 35 U.S.C. § 102 and 103**

On pages 2-10 of the Office Action, the Examiner rejects all pending claims under either 35 USC § 102 or 35 USC § 103. Claims 19-23, 26 and 28-31 are rejected as anticipated by, or in the alternative, obvious in light of Bertsch-Frank (US 5,902,682). The Examiner argues that this reference discloses particles that inherently anticipate Applicants claims because they have the same chemical components in the same amounts. Claim 19 is allegedly a product-by-process claim due to the requirement that the outer layer of particles be prepared using an aqueous solution comprising 2-20% alkali metal silicate. As such, the claim would be anticipated by any product in the art that falls within the scope of the claim, regardless of the way in which the product was made. Alternatively, the claim is alleged to be obvious because one of skill in the art would want to improve the particles made and would, in the Examiner's view, therefore arrive at the compositions claimed.

In addition, claims are rejected based upon a combination of Bertsch-Frank and CA 2,326,560. The Bertsch-Frank reference is relied upon for the reasons set out above and the

Canadian application is cited as disclosing peroxo compositions containing sodium silicate and sodium sulfate.

Applicants respectfully traverse these rejections.

Applicants agree with the Examiner's characterization of claim 19 as being a product-by-process claim because it requires that the outer layer of particles be prepared using an aqueous solution comprising 2-20% alkali metal silicate. One of the main purposes of product-by-process claims is to allow compositions to be claimed that have unique characteristics which cannot be described by their chemical composition or by physical parameters sufficiently to distinguish them from the prior art. This is, in fact, the reason that they are used in the present application.

As can be seen in Examples 1-3 on pages 24-25 of the application, Applicants have found that the rate at which peroxygen particles dissolve decreases as the *concentration* of alkali metal silicate in the solutions used to make the outer coating of these particles decreases. This is true even though the final particles have exactly the same *amount* of the alkali metal silicates. More specifically, it was found that the dissolution time of the particles more than doubles when the concentration of the solution used to form the outer coat is decreased from 20 wt% to 5 wt% (see Table 1 on page 25 of the application).

The properties of peroxygen particles are, of course, inherent in their composition and structure. Since the particles tested in the Examples 1-3 dissolve at different rates, there must be some difference in the structure of the outer layer of the particles that occurs when the concentration of metal silicate in the preparatory solution changes, *e.g.*, the porosity and pore structure of the layer may be altered. Applicants do not know the exact physical reason for the change in dissolution rate that occurs, but they do know how to produce these changes. In these situations, patent law recognizes product-by-process claims as a legitimate way to obtain patent protection. The important thing to recognize is that the particles that are produced are *not* the same even though the gross chemical composition of the core and the

coatings are the same and the only thing that has been changed is the concentration of a solution used to make their outer coating.

In the rejection of claims under section 102, the Examiner asserts that the compositions in Bertsch-Frank are the same as the compositions claimed. However, this reference does not disclose the concentration of metal silicates in the solutions used to make particles or the dissolution characteristics of the compositions made. Thus, Applicants can see no basis for concluding that the compositions disclosed in Bertsch-Frank fall within the scope of the present claims. Moreover, there is no reason why the other teachings in Bertsch-Frank *necessitate* the use of a metal silicate solution falling within the scope of the claims and therefore this reference cannot constitute an inherent anticipation.

With respect to obviousness, Bertsch-Frank does not recognize any relationship between the dissolution time of coated peroxygen particles and the concentration of an aqueous solution of a coating component. Therefore, one of skill in the art would have no motivation to change the concentration of a coating solution in order to arrive at particles having improved properties.

The Examiner suggests that Bertsch-Frank renders Applicants' claims obvious because one of skill in the art would want to improve the particles it discloses and optimize the way that they are made. However, it is again important to note that this reference does not recognize any connection between the concentration of metal silicates in a solution used to make particles and the properties of the particles produced. Therefore, even if Bertsch-Frank provides a motivation to improve particles, it does not suggest doing so by leaving the chemical composition of the particles the same and changing the concentration of metal silicates in the solution used to form their outer layer. Similarly, if one wanted to improve the process used in making the particles, there is nothing in Bertsch-Frank to suggest that changing the metal silicate concentration of a preparatory solution is something that should be tried. In this same regard, it should be appreciated that a change in the characteristics of a product based solely on the concentration of a precursor solution is not something that would ordinarily be expected.

The Examiner also suggests that Applicants have not done a direct comparison between compounds made according to Bertsche-Frank and those claimed. However, the Bertsche-Frank reference does not have any relevant teachings regarding the concentration of metal silicates in solutions used to form the outer layer of particles. Thus, the reference lacks sufficient guidance to allow a meaningful comparison to be made.

The arguments made above with respect to Bertsche-Frank apply even more clearly with respect to the Canadian '560 reference. Again, the reference fails to disclose any compositions falling within the scope of Applicants' claims or a relationship between the dissolution time (or other properties) of coated peroxygen particles and the concentration of metal silicates in a solution used to make the outer layer of the particles. Therefore, this reference does not render Applicants' claims obvious either when considered alone or in combination with Bertsche-Frank.

In light of the above considerations, Applicants submit that the rejections of claims as anticipated or obvious has been overcome and respectfully request that these rejections be withdrawn.

## **II. Provisional Double Patenting Rejection**

On pages 10 and 11 of the Office Action, claims 19-31 and 37 are provisionally rejected on nonstatutory obviousness-type double patenting grounds. The Examiner alleges that the instant claims are obvious with respect to claims 1-13 in US 11/301,330 and with respect to claims 16-25, 30 and 31 in US 10/539,285.

Since none of the applications involved in this rejection has been allowed, Applicants would like to defer responding to this rejection. If the present case is allowed prior to the other cited applications, Applicants believe that the rejection should automatically be withdrawn.

### Conclusion

In light of the amendments and discussion above, Applicants believe that all of the Examiner's rejections have been overcome. It is therefore respectfully requested that these rejections be withdrawn and that the claims now pending be allowed. Early notice to this effect is earnestly solicited.

If, in the opinion of the Examiner, a phone call would help to expedite the prosecution of this application, the Examiner is invited to call Applicants' undersigned attorney at (240) 683-6165.

Respectfully submitted,

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By \_\_\_\_\_

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